Title (en)
    MOTOR CONTROLLER WITH HALL SENSOR MISALIGNMENT COMPENSATION

Title (de)
    MOTORSTEUERUNG MIT HALLSENSOR-FEHLAUSRICHTUNGSKOMPENSATION

Title (fr)
    DISPOSITIF DE COMMANDE DE MOTEUR AVEC COMPENSATION DE DÉSALIGNEMENT DE CAPTEUR À EFFET HALL

Publication
    EP 2198511 B1 20110831 (EN)

Application
    EP 08769508 A 20080519

Priority
    • US 2008064054 W 20080519
    • US 85099907 A 20070906

Abstract (en)
    [origin: WO2009032365A1] A technique can recover from motor stalls caused by misalignment of motor position sensors such as Hall-effect
    sensors. In a normal operating mode, a motor controller provides motor drive current to the motor windings based on the sensor signals according
    to a normal commutation sequence, and monitors for occurrence of a motor stall condition. Upon detecting the motor stall condition, the motor
    controller first momentarily drives the windings according to one of an advanced commutation state and a delayed commutation state each adjacent
    to the given commutation state in the normal commutation sequence, and determines whether the motor stall condition persists. If the stall condition
    persists, then the motor controller next momentarily drives the windings according to the other of the advanced commutation state and the delayed
    commutation state. By this action, the controller attempts operation at both preceding and succeeding portions of the torque characteristic, such that
    operation with increased torque is ensured even though the direction of the sensor misalignment is unknown.

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